10/23/2013

Loleta Community Services District

Compliance Project Proposal for Administrative Civil Liability Complaint No. R1-2012-0086

October 2013

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1. Introduction

This document presents a compliance project proposal from the Loleta Community Services District to address effluent violations that occurred from May 1, 2005 through May 30, 2012. The Loleta Community Services District (District) operates a Wastewater Treatment Facility (WWTF) regulated under the North Coast Regional Water Quality Control Board (NCRWQCB). The District operated under waste discharge requirements issued by the NCRWQCB in Order No. R1-2001-0059 from June 2001 through May 2008 and under Order No. R1-2008-0001 from May 2008 to present. The District was required to meet specific effluent limitations contained in the Order No. R1-2001-0059, which includes, in part effluent limitations shown in Table 1 below for Discharge Point 001.

Table 1: Order No. R1-2001-0059 Effluent Limitation for Discharge Point 001

Constituent	Units	Average Monthly	Average Weekly	Daily Maximum
Biochemical Oxygen Demand 5-day @ 20º C	Mg/L	30	45	60
	Lbs/day	25	38	60
Total Suspended Solids (TSS)	Mg N/L	30	45	60
	Lbs/day	25	38	50
Coliform Bacteria	MPN/100 ml	23	-	230
Settleable Solids	Ml/l	0.1	-	0.2
Hydrogen Ion	pH	Not less than 6.5 nor greater than 8.5		
Additional Limitations:				
There shall be no detectable levels of chlorine in effluent discharges to discharge SN 001, using a minimum detection limit of 0.1 mg/l				
The arithmetic mean of the BOD (20º C, 5-day) and Suspended Solids Values, by weight, for effluent samples collected in a period of 30 consecutive days shall not exceed 15 percent of the arithmetic mean values, by weight, for influent samples collected at approximately the same time during the same period (85 percent removal).				

The District was also required to meet effluent limitations contained in Order No. R1-2008-0001, adopted March 6, 2008 and effective on May 2, 2008 which include the following:

Table 2: Order No. R1-2008-0001 Effluent limitations & Discharge Specifications

Constituent	Units	Average Monthly	Average Weekly	Daily Maximum
Biochemical Oxygen Demand 5- day @ 20º C	Mg/L	30	45	60
	Lbs/day	25	38	60
Total Suspended Solids (TSS)	Mg N/L	30	45	60
	Lbs/day	25	38	50
Total Coliform Bacteria	MPN/100 ml	23	-	230
Settleable Solids	Ml/l	0.1	-	0.2
Chlorine, Total Residual	Mg/L	No detectable levels using a minimum detection limit of 0.1 mg/L		

On July 25, 2012, the District was issued Administrative Civil Liability Complaint (ACLC) No. R1-2012-0086 for violations of effluent limitations in Order No. R1-2001-0059 and R1-2008-0001 for the period May 1, 2005 through May 30, 2012. The violations are summarized in Table 3 below and a complete list is included in Appendix A. ACLC No. R1-2012-0086 documents 86 violations in the seven years from May 1, 2005 through May 30, 2012, including 76 that have been found to be subject to Mandatory Minimum Penalties (MMP's) totalling $228,000 in fines. Discretionary fines during the seven-year period are being deferred and are not the subject matter of this complaint or compliance plan.

In response to the ACLC, the District is pursuing a compliance project to address the violations in lieu of paying MMP's. This document presents a proposal for the formal compliance project to address the cause of ACLC and the District's approach to overall compliance. The formal compliance project includes a description of the project, the project objectives, the link between the project and the violations, a work plan, and responsible party information. A description of the District's approach to the compliance project is described in the next section.

Table 3: Summary of Violations of Effluent Limitations in Waste Discharge Requirements Orders No. R1-2001-0059 and R1-2008-0001 from May 1, 2005 through May 30, 2012.

Parameter	Number of Occurrences Subject to Mandatory Minimum Penalties (MMP's)	Total of Mandatory Minimum Penalties	Number of Occurrences NOT subject to MMP's
TSS, Daily Maximum	1	$3,000	0
TSS, Weekly	1	$3,000	0
TSS, Monthly Average	3	$9,000	0
TSS % Monthly Average lb/day Removal	6	$18,000	1
Coliform Daily Median	1	$3,000	
Coliform Daily Maximum	9	$27,000	1
Coliform, monthly Median	5	$15,000	1
pH	18	$54,000	6
Total Residual Chlorine, Effluent	15	$45,000	0
Settleable Solids, Daily Maximum	10	$30,000	0
Settleable Solids, Monthly Average	3	$9,000	0
BOD, Daily Maximum	0	$0	1
BOD, Weekly Average	1	$3,000	0
BOD, Monthly Average	2	$6,000	0
BOD %, Monthly Average lbs/day Removal	1	$3000	0
Total	76	$228,000	10

2. Approach to Compliance

The Loleta Community Services District is approaching the implementation of a compliance project to improve effluent quality in two ways. The first is through a formal compliance project to address the requirements of the ACLC. The second is to start planning for additional projects to continue to improve effluent quality. The formal compliance project addresses inflow and infiltration and will help address the Coliform, BOD, TSS, Settleable Solids, Chlorine Residual and pH violations as described below.

2.1 Inflow and Infiltration (I&I)

I&I is a major contributor to a significant number of the violations. Extreme changes in flow rate caused by excess inflow to the WWTF results in the following issues in the ACLC:

- pH - Chlorine and sulfur dioxide feeds vary according to effluent rates. Spikes in flow result in excessive acidic chemical feeds which drive down the pH below the 6.5 threshold requirement.
- Chlorine - During rain events, the proportional chlorine feed increases beyond chlorine demand and the sulfur dioxide feed also increases proportionately, but at a slower rate. As a result, the residual chlorine can exceed the sulfur dioxide feed.
- Settleable solids, BOD and TSS- Spikes to plant flow can strip sludge from places outside the clarifier where it has settled and drive them through the WWTF. High flows limit Returned Activated Sludge (RAS) recirculation through the aeration basin, which has caused sludge to be found past the clarifier in the treatment train.
- Coliform - Dilution of influent from high I&I combined with some increased BOD and TSS in the effluent can result in a failure to meet the 85% removal requirement.

As described above reduction of I&I can reduce all types of violations included in the ACLC and result in improved effluent quality.

2.2 Plant Upgrades

Significant upgrades to the WWTP should wait until I&I and regular flow is reduced to the EPA standard of 275 gallons per customer day, or 206,000 gpd. From January 1, 2012 to August 31, 2012 the District had 24 days of flow more than 206,000 gpd with a high of 354,000 gallons. In early December 2012, after 9.8-inches of rain in 5 days, WWTF flows exceeded the 0.619 mgd range of the WWTF electronic gage.

In addition to looking at plant improvement options, the District is undertaking several other I&I reduction projects not included in this compliance plan that will benefit system performance.

3. Sanitary Sewer Collection System Rehabilitation Compliance Project

The proposed Sanitary Sewer Collection System Rehabilitation Compliance Project is intended to improve the reliability of the current sewer collection system and to reduce potential for I&I in the collection system, thus improving effluent quality. Appendix C provides an overall site map of the sewer collection system and the WWTF. The existing collection system is comprised mostly of Vitrified Clay Pipes (VCP) and brick manholes installed in the late 1940's and through the 1950's. The proposed projects include the rehabilitation of portions of the collection system, which is susceptible to I&I. The District has Closed Circuit Television Videos (CCTV's) of the collection system from 2005, as well as a history of SSOs, smoke testing, and flow measurements at selected manholes. In evaluating this data, there are three immediate projects which the District believes are necessary for the collection system. The estimated cost to complete these repairs, as described in this Section, exceeds the cost of the MMPs in the ACLC, and thus this compliance project appropriately addresses the ACLC violations.

3.1 Repair 1 – Eel River Drive Main Replacement

The pipeline and several manholes serving the entire collection system at the approach to the WWTF are located west of Eel River Drive, in a field outside of the public Right-of-Way (See Appendix C, Figure 1). Along this route there is a lateral serving three residences outside the District's jurisdiction north of the WWTF.

Flows from south-east portion of the collection system south of Church Street are currently routed to the WWTF up Eel River Drive before connecting at a tee to another sewer main at the intersection of Loleta Drive and Eel River Drive, which runs to the WWTF through manholes located west of Eel River Drive outside of the Public Right of Way. This 6" VCP that runs up a portion of Eel River Drive south of Church Street crosses under an existing storm drain pipe before entering a manhole located at the intersection of Church Street and Eel River Drive. This is the deepest manhole in the collection system. Despite this manhole being directly across the street from the WWTF, a distance of approximately 200 feet from headworks, the sewer main runs from this manhole up West Eel River Drive approximately 320 feet to the intersection of Loleta Drive and Eel River Drive where the main connects to another main that then runs back south to the WWTF in the field outside of the public Right-of-Way. Thus, influent flows from the entire collection system, with the exception of a few laterals, currently enter the WWTF from a field located on private property, which has been prone to flooding.

3.1.1 I&I Flow Measurement confirmation

I&I contribution could not be confirmed by electronic flow testing at this project location due to manholes blocked with debris. All manholes slated for replacement or rehabilitation as part of this repair were visually inspected and show increased flows during rain events.

A Sanitary Sewer Overflow (SSO) due to a grease blockage just above the headworks at the WWTF has occurred in the manhole upstream of the WWTF. An 8" open sewer line runs above a 12" storm drain in this manhole. Backups in the manhole spill over onto the storm drain line.

3.1.2 Proposed Repair

The existing line north of the WWTF and the manholes west of Eel River Drive are proposed to be abandoned in place. The existing manhole located at the intersection of Church Street and Eel River Drive across from the WWTF will be replaced. The flows from the entire collection system that are currently routed through the field north of the WWTF will be re-routed inside the public Right-of-Way from the existing manhole located at the intersection of Loleta Drive and Eel River Drive, which will be replaced, to a new manhole located at the intersection of Church Street and Eel

River Drive. A new 8" HDPE pipe will connect between the cleanout located south of Church Street on Eel River Drive and the new manhole across from the WWTF and between the new manhole located at the intersection of Loleta Drive and Eel River Drive. A new 12" HDPE influent line will be directionally drilled across Eel River Drive to the WWTF. A line that runs across Eel River Drive to the WWTF would provide flexibility for future plant upgrades and would be placed within the District WWTF's property.

In addition, the existing lateral connection to the main line currently located in the field north of the WWTF will be re-routed and connected to the sewer main. Depending on the length and the existing invert elevations of this lateral, a pump may be needed to force the sewer through this lateral to the WWTF.

The Opinion of Probable Construction Cost for the repairs described above is provided in Table 4 below. The estimate is divided into two four main parts. The first part includes Items 1 through 3, which account for surveying and engineering work. The second part of the estimate includes Items 4 through 9 and, which account for items required to complete the work, but were not described as part of the repairs. The third part includes items specific that are specific to the repair needed and the last part includes items associated with construction oversight and project closeout.

Item 1 includes the cost to review the project after a survey has been conducted and confirm the construction methodology and the new pipeline alignment. Item 2 includes preparation of the Plans and Specification for the repairs including Plan and Profile views for construction of the new pipeline down Eel River Drive. Item 3 includes advertising the project out to bid, conducting a pre-bid meeting and assist in execution of the Contract.

Item 4 includes mobilizing construction equipment to and from the site. The cost of mobilization and demobilization depends on what type of equipment used and the distance the contractor needs to travel to the site. Item 5 includes staking of the new pipeline alignment using the horizontal control plan that will be provided to the Contractor as part of the Bid Package. Item 6 includes providing traffic control. The work will be conducted in the County Right-of-Way and is subject to all the County Encroachment Permit Conditions, which include the preparation and execution of a Traffic Control Plan. Item 7 accounts for shoring of excavations deeper than five-feet as required by OSHA. It is anticipated that excavations to replace the pipeline along Eel River Drive will require excavation deeper than five feet. Item 8 accounts for preparation and execution of an Erosion & Sediment Control Plan. This site specific plan will detail the Best Management Practices (BMP's) that will be used to prevent run-off from leaving the construction site. Item 9 accounts for a bypass pumping system that will need to be installed to allow for continuous operation of the collection system and the WWTF during construction.

As described in this Proposed Compliance Plan, three repairs are proposed. Combining several repairs into one project executed under a single Contract is more economical than executing each repair as an individual project under separate Contracts.

Table 4: Opinion of Probable Construction Cost for repairs to sewer main and manholes located on and west of Eel River Drive

Item No.		Quantity	Units	Unit Cost	Total
1	Preliminary Design Evaluation and Survey Construction Site	1	LS	$10,000	$10,000
2	Develop Bid Package (Plans and Specifications)	1	LS	$22,500	$22,500
3	Project Bidding	1	LS	$2,500	$2,500
				Sub-Total	$35,000
4	Mobilization/Demobilization	1	LS	$3,500	$3,500

5	Construction Staking	1	LS	$5,750	$5,750
6	Traffic Control	1	LS	$12,000	$12,000
7	Shoring and Trench Safety	1	LS	$5,750	$5,750
8	Erosion & Sediment Control	1	LS	$4,000	$4,000
9	Bypass Pumping System	1	LS	$3,000	$3,000
				Sub-Total	$34,000
10	Replace 8" VCP with 8" HDPE DR 17 IPS to connect between Manholes 320 and 220 & between Manholes 240 & 220	650	LF	$183	$118,950
11	Connect Existing laterals on Eel River Drive	2	EA	$2,000	$4,000
12	Connect and reroute connection west of Eel River Drive	1	LS	$10,000	$10,000
13	Remove and Replace Manhole	2	EA	$4,700	$9,400
14	Directional Drill 10” HDPE across Eel River Drive between WWTF property and end at Manhole 220	1	LS	$23,000	$23,000
				Sub-Total	$165,350
15	Construction Contingency	1	LS	$20,000	$20,000
16	Construction Management and Construction Inspection	1	LS	$10,000	$10,000
17	Construction Closeout	1	LS	$1,000	$1,000
				Sub-Total	$31,000
Total Opinion of Probable Construction Cost for Repair 1:					***$265,530***

3.2 Repair 2 - North Montgomery Drive Main Rehabilitation

Existing 8” Vitrified Clay Pipe (VCP) and brick manholes constructed in the late 1950’s serve the upper half of the sub-section that serves Loleta west of Main Street and North of Loleta Drive (See Appendix C for project location). This 8” VCP begins at Montgomery Drive near Loleta Drive and runs north down Montgomery Drive to the intersection with Main Street. The district has observed noticeable increase in rain flow into the manholes and the existing 8” Vitrified Clay Pipe (VCP).

3.2.1 I&I Flow Measurement Confirmation:

Rainfall data, and measurement of influent WWTF flows and flows from the manhole located at the intersection of Main Street and Eel River Drive (MH360) were collected by the District on January 26, 2012 and are presented in Appendix B, Figures B1-B3. This manhole collects flows from North Montgomery Drive, It is clear that the flow through this manhole tracks the flow at the wastewater plant with significant amounts of inflow and infiltration.

3.2.2 Repair Description

The District proposes to install a Cast-In-Place Pipe (CIPP) on the existing 8” VCP line. Currently, there are more laterals than residences. Lateral connection needed will be revealed using CIPP equipment and reconnected. The manhole located approximately mid-way along this run on Montgomery Drive will be rehabilitated and the manhole currently located on the north end of Montgomery Drive will be removed and a new manhole installed approximately 10-feet to the north on Main Street.

The opinion of probable construction cost for the repairs described above are provided in Table 5 below. Items 4 through 8 were described under Repair 1 and are typical for all three repairs. Construction staking will not be needed for this repair as the existing pipeline and manholes will be rehabilitated, except for one manhole that will be removed and replaced approximately 10 feet away for its current location. Shoring and trench safety may only be required during the installation of the new manhole. CIPP is a trenchless technology that eliminates the need for shoring and trenching. The cost associated with these items assumes that repairs 1, 2 and 3 are executed under a single contract.

Table 5: Opinion of Probable Construction Cost for repairs to sewer main and manholes located on North Montgomery Drive

Item No.		Quantity	Units	Unit Cost	Total
1	Preliminary Design Evaluation and Survey Construction Site	1	LS	$1,000	$1,000
2	Develop Bid Package (Plans and Specifications)[A]	1	LS	$1,250	$1,250
3	Project Bidding	1	LS	$2,500	$2,500
				Sub-Total	$4,750
4	Mobilization/Demobilization	1	LS	$3,500	$3,500
5	Traffic Control	1	LS	$10,000	$10,000
6	Erosion & Sediment Control	1	LS	$1,250	$1,250
7	Bypass Pumping System	1	LS	$3,000	$3,000
				Sub-Total	$17,750
8	CIPP 8" VCP	666	LF	$45	$29,970
9	Restore Connections	13	EA	$400	$5,200
10	Rehabilitate Manhole	2	LF	$425	$850
11	Remove and Replace Manhole	1	EA	$4,700	$4,700
				Sub-Total	$40,720
12	Construction Contingency	1	LS	$6,000	$6,000
13	Construction Management and Construction Inspection	1	LS	$4,500	$4,500
14	Construction Closeout	1	LS	$1,000	$1,000
				Sub-Total	$11,500
Total Opinion of Probable Construction Cost for Repair 2:					$74,720

Footnote:

[A] This repair and Repair 1 and 3 will be executed under a single contract. Special Provisions and some section of the Technical Specification can be used for all repairs.

3.3 Repair 3 - Pershing Avenue to Franklin Avenue (Boutwell Lateral) Rehabilitation

This is a blind sub-section in the collection system with no manhole access. The Boutwell lateral runs the length of two parcels on private property from Pershing Avenue to Franklin Avenue (See

Appendix C). This lateral serves seven residences. The line was inspected from the clean-out for about 100 ft. which showed pipe offsets and root intrusion.

3.3.1 I&I Flow Measurement Confirmation:

Rainfall data, measurement of influent WWTF flows and flows from the manhole located at the intersection of Loleta Drive and Franklin Avenue (MH100) were recorded from November 5th through November 7th, 2009 and are presented in Appendix B, Figures B4-B7. This manhole serves the entire top half of town. There seems to always be background infiltration based on increased minimal flows as the rain event progresses. However, inflows spikes are not obvious and infiltration seems delayed and then fairly continuous suggesting indirect connection from the water table and not percolation from above.

3.3.2 Description of Proposed Repairs

The sewer lateral is installed in narrow access way adjacent to gas and water lines and with a small post and pier structure running over portion of the lateral. CIPP will be used to rehabilitate the 180 foot long section of the Boutwell lateral requiring repair. The opinion of probable construction cost for the repairs described above are provided in Table 6 below.

Table 6: Opinion of Probable Construction Cost for repairs to sewer lateral located between Pershing Avenue and Franklin Avenue on private property.

Item No.		Quantity	Units	Unit Cost	Total
1	Preliminary Design Evaluation and Survey Construction Site	1	LS	$1,000	$1,000
2	Develop Bid Package (Plans and Specifications)[A]	1	LS	$1,250	$1,250
3	Project Bidding	1	LS	$2,500	$2,500
				Sub-Total	$4,750
4	Mobilization/Demobilization[B]	1	LS	$3,500	$3,500
5	Traffic Control	1	LS	$2,600	$2,600
6	Erosion & Sediment Control	1	LS	$500	$500
7	Bypass Pumping System	1	LS	$3,000	$3,000
				Sub-Total	$9,600
8	CIPP Lateral	180	LF	$115	$20,700
9	Restore Connections	7	EA	$400	$2,800
				Sub-Total	$23,500
10	Construction Contingency	1	LS	$3,000	$3,000
11	Construction Management and Construction Inspection	1	LS	$1,500	$1,500
12	Construction Closeout	1	LS	$1,000	$1,000
				Sub-Total	$8,500
Total Opinion of Probable Construction Cost for Repair 3:					$46,350

Footnote:

[A] This repair and Repair 1 and 3 will be executed under a single contract. Special Provisions and some section of the Technical Specification can be used for all repairs.

3.4 Compliance Work Plan

Opinion of construction cost for all proposed repairs and additional items included as part of the Work is listed in Table 5 below.

Table 7: Summary of Proposed Sanitary Sewer Collection System Repairs. Loleta Community Services District

Item Description	Opinion of Probable Construction Cost
Eel River Drive Main Replacement	$265,530
North Montgomery Drive Main Rehabilitation	$74,720
Pershing Avenue to Franklin Avenue (Boutwell Lateral) Rehabilitation	$46,350
Total Project Opinion of Probable:	**$386,420**

The proposed repairs are categorically exempt from CEQA under the California Code of Regulations Title 14, Chapter 3, Article 19, Section 15301, Existing Facilities. A listing of parties and agencies involved in the compliance project is included in Appendix D. A detailed work plan for completing the Sewer Collection System Rehabilitation Compliance Project is included in Appendix E and a summary including project tasks and opinion of probable cost in included in Table 8. The detailed work plan includes project tasks and activities and milestones to be achieved, a timeline, and the estimated opinion of probable costs for each activity.

Table 8: Summary of Compliance Project Work Plan for Sanitary Sewer Collection System Repairs. Loleta Community Services District

Task No.	Project	Estimate
1	**Conduct Preliminary Design Evaluation and Survey site of the Eel River Drive Main Replacement project**	$12,000
2	**Develop Bid Package including Plans and Specifications and obtain Humboldt County Encroachment Permit**	$25,000
3	**Request for Proposals**	$7,500
4	**Construction and Construction Inspection and Management (including contingency)**	$338,920
5	**Construction Project Closeout**	$3,000
	Total	**$386,420**

4. Summary

This document presented a compliance proposal to reduce inflow and infiltration, which will help address the Coliform, BOD, TSS, Settleable Solids, Chlorine Residual and pH violations of the Loleta Community Services District waste discharge requirements. The proposed compliance project is anticipated to be completed within one year of adoption of an ACL Order. The compliance project work plan to improve effluent quality is presented in Appendix E and assumes the ACL Order will be adopted by January, 2014.

Appendices

Appendix A – Effluent Violations May 1, 2005 through May 30, 2012.

ACLC R1-2012-0086 **Appendix A**
Loleta CSD

Table A1: Effluent Limitation Violations
May 1, 2005 through May 31, 2012
(Subject to Mandatory Minimum Penalties)

CIWQS No.	Date of Violation	Parameter	Units	Permit Limits	Reported Value	Violation Type	Mandatory Penalty
719464	10/31/05	Coliform, Monthly Median	MPN	23	87	1st Chronic	$0
719473	12/20/05	pH	SU	6.5-8.5	6.2	2nd Chronic	$0
719477	12/24/05	Total Residual Chlorine, Effluent	mg/L	0.0	0.1	Serious	$3,000
719500	12/27/05	pH	SU	6.5-8.5	4.3	Chronic	$3,000
719493	12/29/05	Total Residual Chlorine, Effluent	mg/L	0.0	1.0	Serious	$3,000
721012	1/2/06	Total Residual Chlorine, Effluent	mg/L	0.0	0.1	Serious	$3,000
856047	1/3/06	pH	SU	6.5-8.5	6.2	Chronic	$3,000
721014	1/10/06	pH	SU	6.5-8.5	6.1	Chronic	$3,000
721016	1/10/06	Coliform, Daily Maximum	MPN	230	1600	Chronic	$3,000
856048	1/17/06	pH	SU	6.5-8.5	6.1	Chronic	$3,000
856049	1/24/06	pH	SU	6.5-8.5	6.3	Chronic	$3,000
721020	1/31/06	pH		6.5-8.5	6.3	Chronic	$3,000
721021	1/31/06	Coliform, Monthly Median	MPN	23	50	Chronic	$3,000
721022	2/1/06	Total Residual Chlorine, Effluent	mg/L	0.0	0.6	Serious	$3,000
721023	2/7/06	pH	SU	6.5-8.5	6.2	Chronic	$3,000
721024	2/14/06	Coliform, Daily Maximum	MPN	230	1600	Chronic	$3,000
856050	2/15/06	pH	SU	6.5-8.5	5.9	Chronic	$3,000
721026	2/21/06	Coliform, Daily Median	MPN	230	1600	Chronic	$3,000
721015	2/28/06	pH	SU	6.5-8.5	5.9	Chronic	$3,000
721029	2/28/06	Coliform, Monthly Median	MPN	23	811	Chronic	$3,000
721028	2/28/06	TSS, Monthly Average lb/day Removal	%	85	78	Serious	$3,000
721033	3/7/06	pH	SU	6.5-8.5	6.0	Chronic	$3,000
721037	3/14/06	pH	SU	6.5-8.5	5.8	Chronic	$3,000
774868	3/16/06	TSS, Daily Maximum	lbs/day	50	58.45	Chronic	$3,000
774867	3/16/06	TSS, Weekly	lbs/day	38	58.45	Chronic	$3,000

		Average					
721041	3/21/06	pH	SU	6.5-8.5	6.2	Chronic	$3,000
774870	3/31/06	BOD, Monthly Average	lbs/day	25	27.76	Chronic	$3,000
774869	3/31/06	TSS, Monthly Average	lbs/day	25	58.45	Chronic	$3,000
721043	3/31/06	TSS, Monthly Average lb/day Removal	%	85	43	Serious	$3,000
586051	4/4/06	pH	SU	6.5-8.5	6.1	Chronic	$3,000
721048	4/18/06	pH	SU	6.5-8.5	5.9	Chronic	$3,000
856052	4/25/06	pH	SU	6.5-8.5	6.4	Chronic	$3,000
721069	5/2/06	Coliform, Daily Maximum	MPN	230	900	Chronic	$3,000
721665	11/30/06	TSS, Monthly Average lb/day Removal	%	85	81	1st Chronic	$0
570390	12/5/06	Coliform, Daily Maximum	MPN	230	1600	2nd Chronic	$0
856057	12/12/06	pH	SU	6.5-8.5	5.8	3rd Chronic	$0
571037	12/19/06	Coliform, Daily Maximum	MPN	230	1600	Chronic	$3,000
570388	12/31/06	Coliform, Monthly Median	MPN	23	825	Chronic	$3,000
570397	12/31/06	TSS, Monthly Average lb/day Removal	%	85	78	Serious	$3,000
774168	1/25/07	Settleable Solids, Daily Maximum	ml/L	0.2	0.3	Chronic	$3,000
570398	2/15/07	Settleable Solids, Daily Maximum	ml/L	0.2	0.3	Chronic	$3,000
719455	2/25/07	Coliform, Daily Maximum	MPN	230	1600	Chronic	$3,000
774878	2/28/07	TSS, Monthly Average lb/day Removal	%	85	84	Chronic	$3,000
774877	12/22/07	Total Residual Chlorine, Effluent	mg/L	0.0	8.8	Serious	$3,000
774879	1/5/08	Total Residual Chlorine, Effluent	mg/L	0.0	1.2	Serious	$3,000
774880	1/10/08	pH	SU	6.5-8.5	6.2	3rd Chronic	$0
774881	1/12/08	Total Residual Chlorine, Effluent	mg/L	0.0	5.1	Serious	$3,000
774882	1/19/08	Total Residual Chlorine, Effluent	mg/L	0.0	0.1	Serious	$3,000
774883	1/20/08	Total Residual Chlorine, Effluent	mg/L	0.0	7.8	Serious	$3,000
774884	1/21/08	Total Residual	mg/L	0.0	5.3	Serious	$3,000

		Chlorine, Effluent					
774885	1/26/08	Total Residual Chlorine, Effluent	mg/L	0.0	10.0	Serious	$3,000
774886	2/02/08	Total Residual Chlorine, Effluent	mg/L	0.0	1.3	Serious	$3,000
774887	2/03/08	Total Residual Chlorine, Effluent	mg/L	0.0	0.8	Serious	$3,000
774888	2/29/08	TSS, Monthly Average lb/day Removal	%	85	84	Chronic	$3,000
919404	2/11/09	Settleable Solids, Daily Maximum	ml/L	0.2	0.5	Serious	$3,000
919405	2/11/09	pH	SU	6.5-8.5	6.3	2nd Chronic	$0
	2/19/09	pH	SU	6.5-8.5	6.1	3rd Chronic	$0
	2/26/09	Settleable Solids, Daily Maximum	ml/L	0.2	0.5	Serious	$3,000
	2/26/09	pH	SU	6.5-8.5	6.1	Chronic	$3,000
	2/28/09	Settleable Solids, Monthly Average	ml/L	0.1	0.3	Serious	$3,000
	3/5/09	pH	SU	6.5-8.5	6.0	Chronic	$3,000
	3/5/09	Settleable Solids, Daily Maximum	ml/L	0.2	0.4	Serious	$3,000
	3/29/09	Total Residual Chlorine, Effluent	mg/L	0.0	0.4	Serious	$3,000
867044	1/14/10	Settleable Solids, Daily Maximum	ml/L	0.2	0.5	Serious	$3,000
867045	1/23/10	Settleable Solids, Daily Maximum	ml/L	0.2	0.9	Serious	$3,000
	1/31/10	Settleable Solids, Monthly Average	ml/L	0.1	0.35	Serious	$3,000
	4/13/10	Coliform, Daily Maximum	MPN	230	500	Chronic	$3,000
	4/20/10	Coliform, Daily Maximum	MPN	230	500	Chronic	$3,000
	4/30/10	Coliform, Monthly Median	MPN	23	811	Chronic	$3,000
	5/15/10	Total Residual Chlorine, Effluent	mg/L	0.0	2.1	Serious	$3,000
	5/31/10	Coliform, Monthly Median	MPN	23	25	Chronic	$3,000
	12/16/10	Settleable Solids, Daily Maximum	ml/L	0.2	0.5	Serious	$3,000
	12/30/10	BOD, Daily Maximum	lbs/day	50	54.71	2nd Chronic	$0
	12/30/10	BOD, Weekly Average	lbs/day	38	54.71	Serious	$3,000
	12/31/10	TSS, Monthly Average	lbs/day	25	30.09	Chronic	$3,000

	12/31/10	BOD, Monthly Average	lbs/day	25	54.71	Serious	$3,000
	12/31/10	BOD %, Monthly Average lbs/day Removal	%	85	74	Serious	$3,000
	1/4/11	Coliform, Daily Maximum	MPN	230	1600	Chronic	$3,000
	2/28/11	TSS, Monthly Average	lbs/day	25	31.53	Chronic	$3,000
	2/28/11	TSS %, Monthly Average lbs/day Removal	%	85	71	Serious	$3,000
	3/3/11	Settleable Solids, Daily Maximum	ml/L	0.2	0.3	Serious	$3,000
	3/24/11	pH	SU	6.5-8.5	6.4	Chronic	$3,000
	5/10/11	Coliform, Daily Maximum	MPN	230	300	Chronic	$3,000
913958	11/24/11	pH	SU	6.5-8.5	6.2	Chronic	$0
919201	1/20/12	Settleable Solids, Daily Maximum	ml/L	0.2	1.2	Serious	$3,000
919199	1/31/12	Settleable Solids, Monthly Average	ml/L	0.1	0.3	Serious	$3,000
						Total	**$228,000**

Appendix B – Inflow and Infiltration Flow Testing

- Figures B1-B3 – Flow Measurement January 24- 26, 2012 at Manhole 360 downstream of Repair #2 – North Montgomery Drive Main Rehabilitation.
- Figures B4-B7 - Flow Measurement November 5- 8, 2009 at Manhole 100 downstream of Repair #3 – Pershing Avenue to Franklin Avenue (Boutwell Lateral) Rehabilitation.

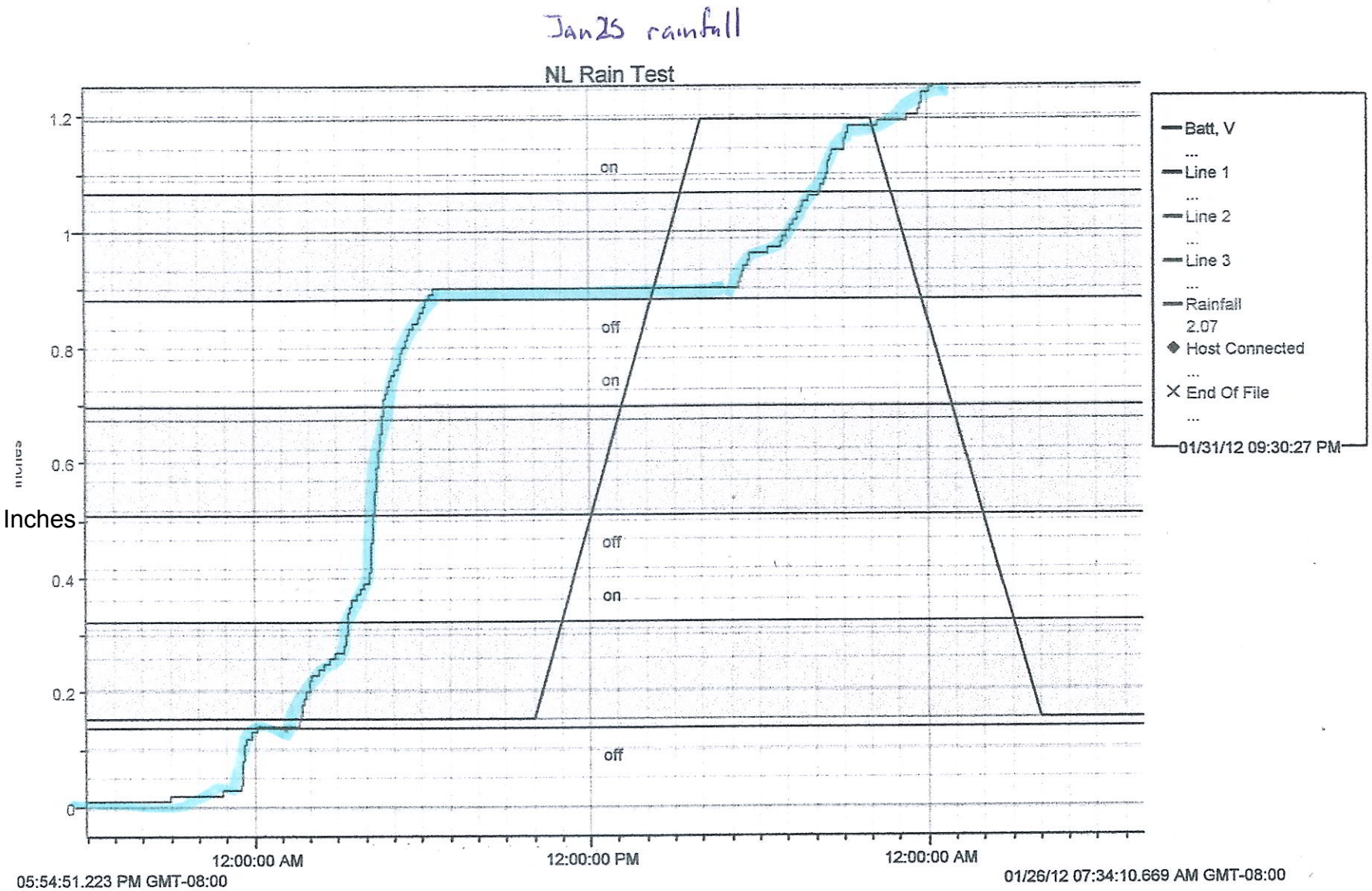


Figure B1: Rainfall on January 25, 2012

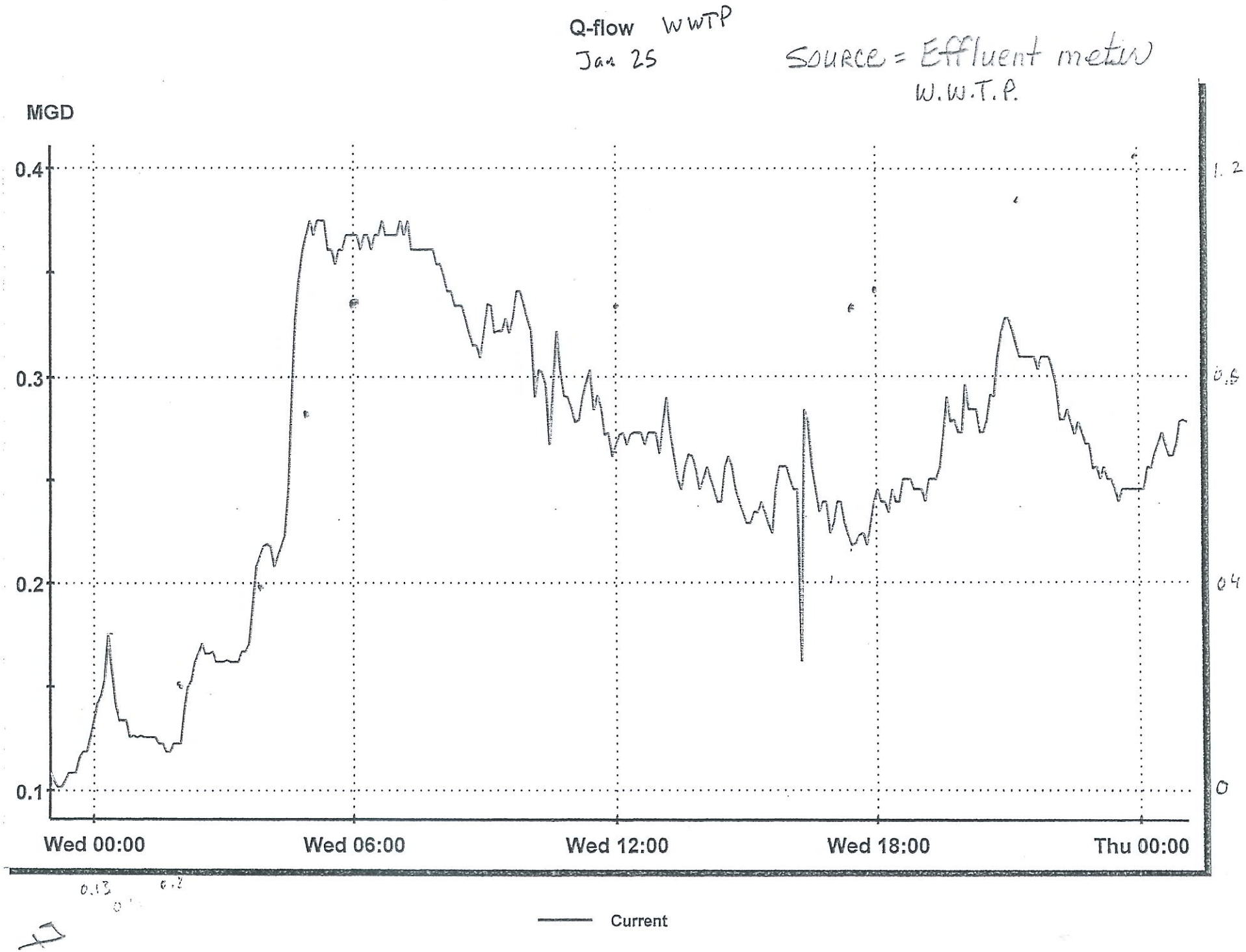
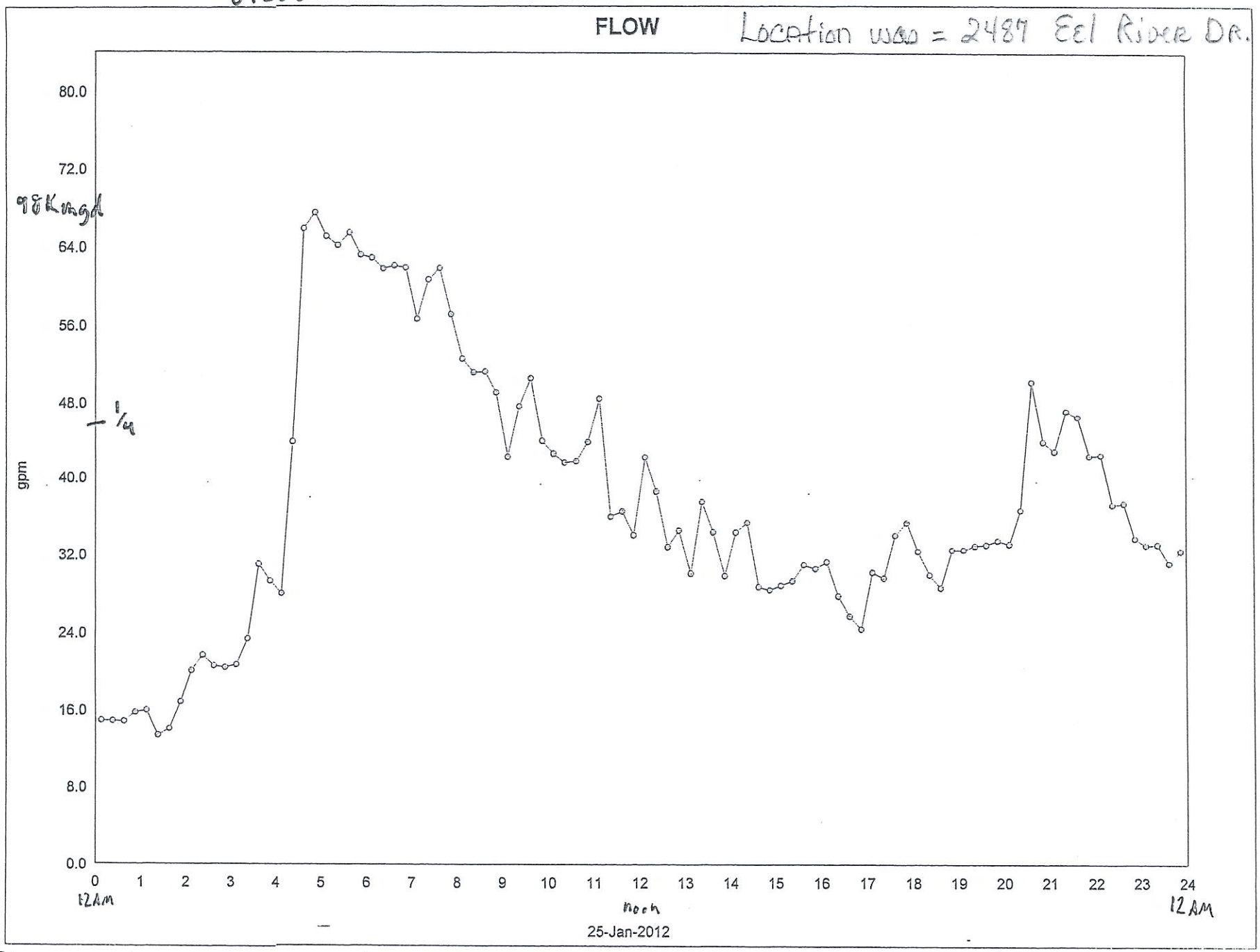


Figure B2: WWTP Flows

0.265 MH 360 SOURCE = DATA GATOR



16 gpm = 23040 gpd

Figure B3: MH 360 Flow on January 25, 2012

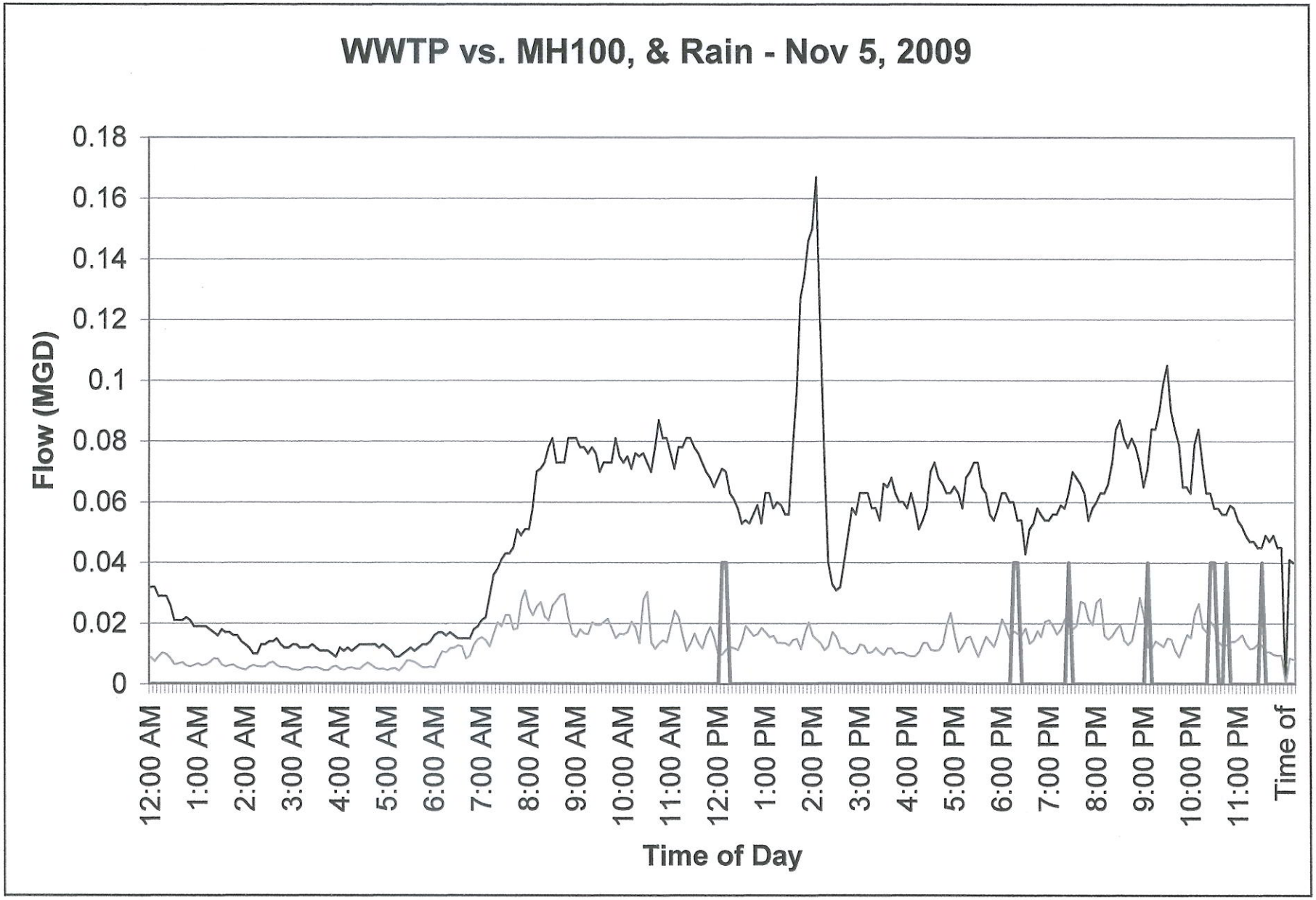


Figure B4: Flow Measurement November 5, 2009

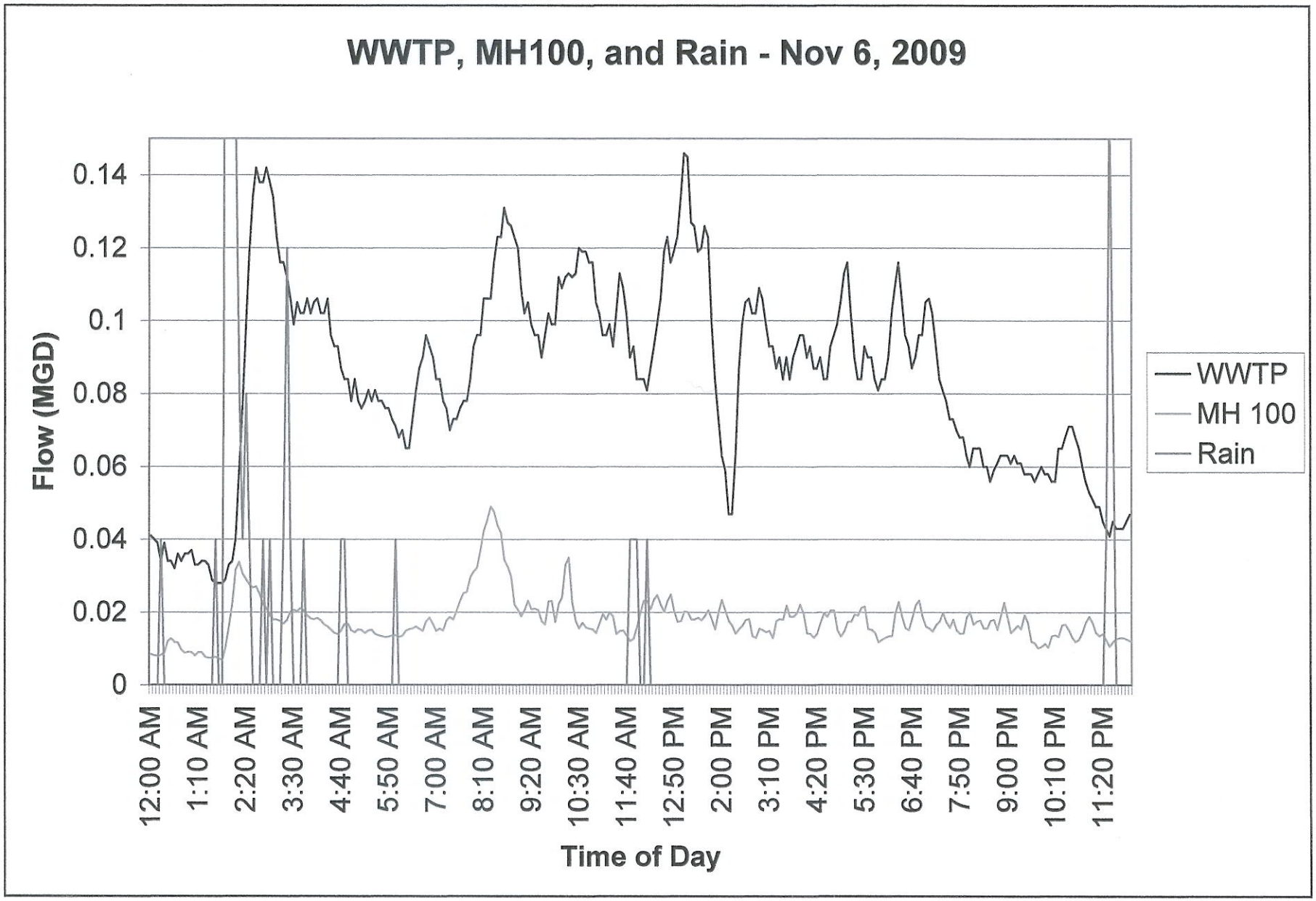


Figure B5: Flow Measurement November 6, 2009

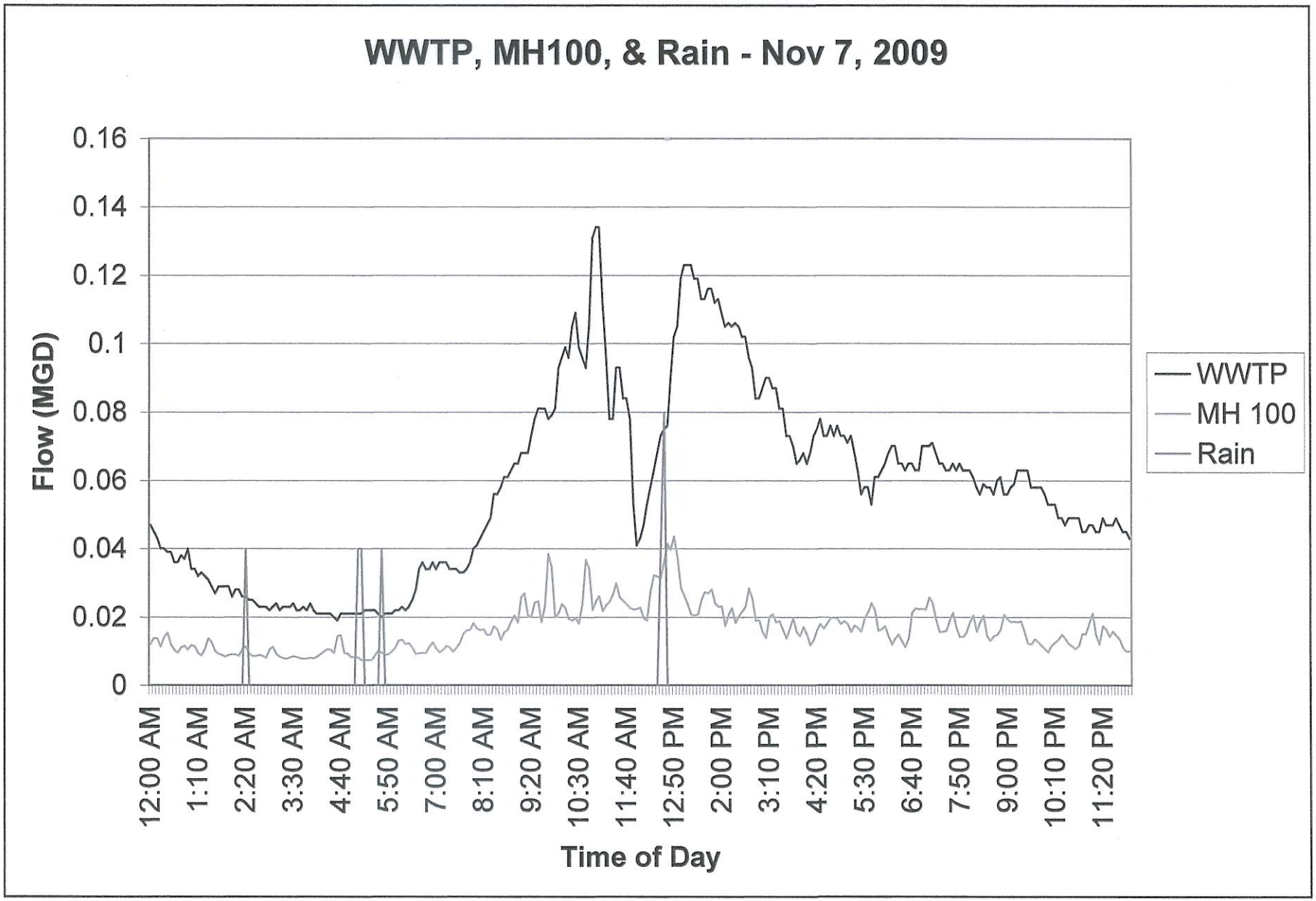


Figure B6: Flow Measurement November 7, 2009

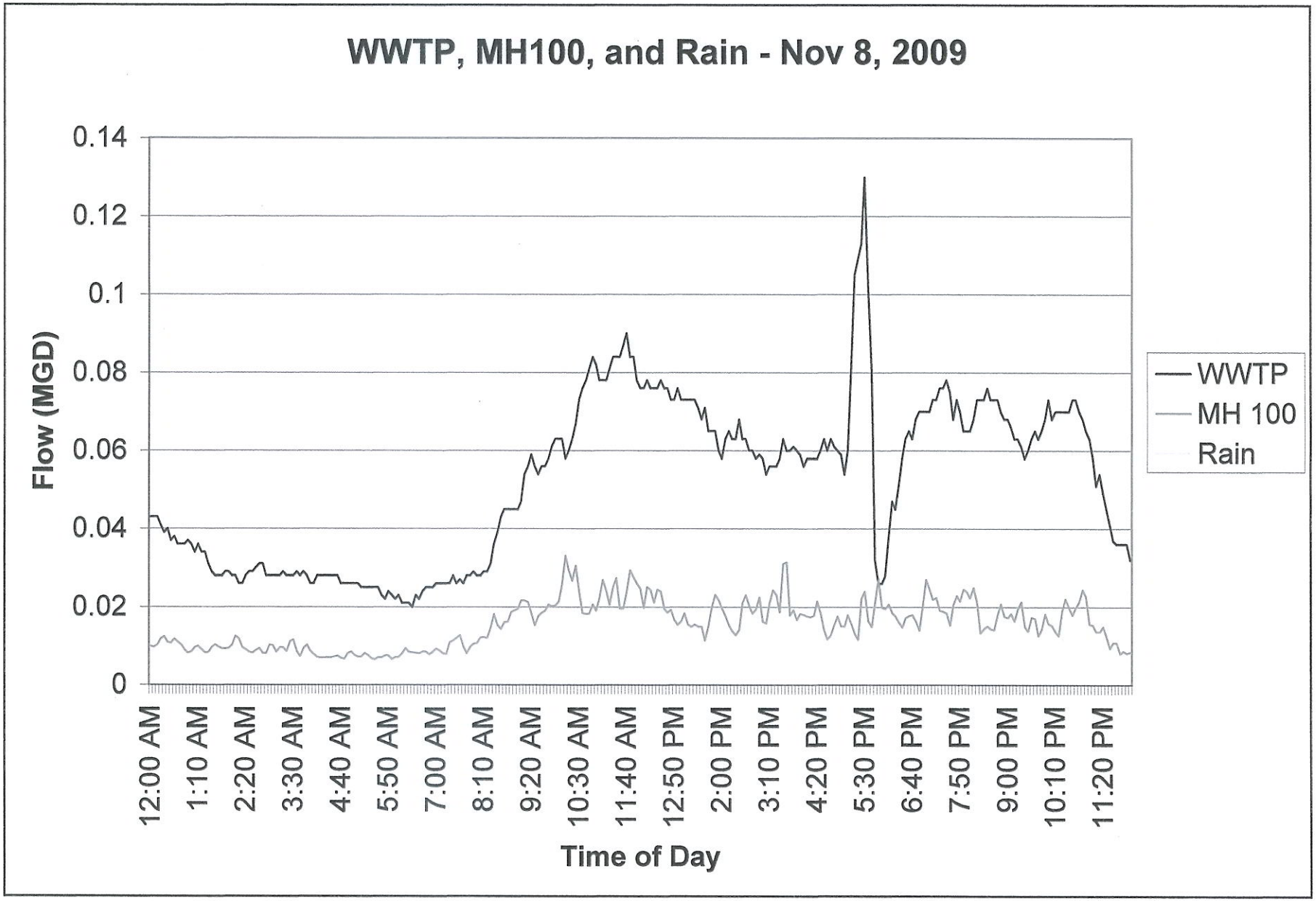
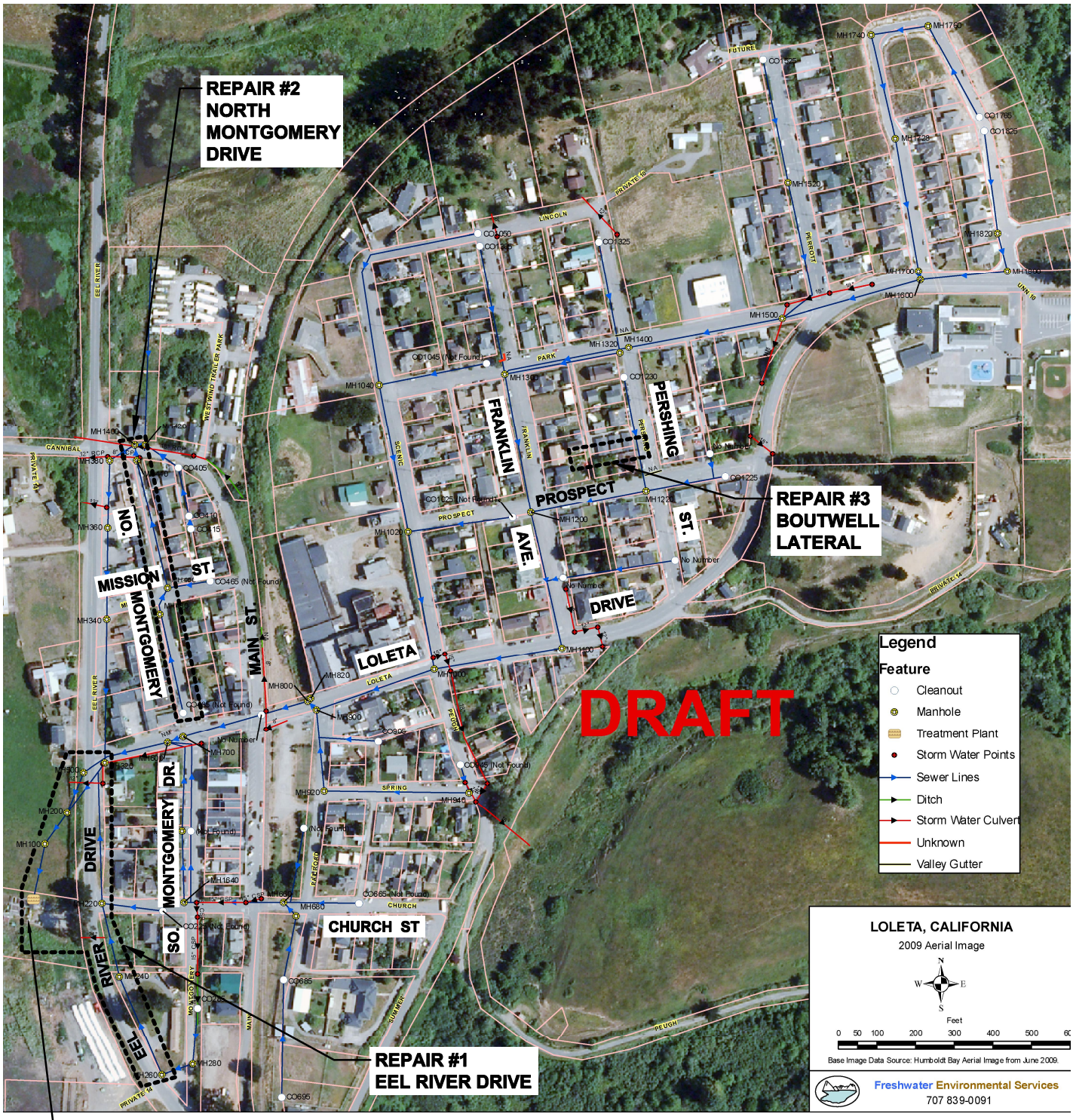


Figure B7: Flow Measurement November 8, 2009

Appendix C – Loleta Community Services District Sewer Collection System and WWTF Site Map



LOLETA COMMUNITY SERVICES DISTRICT
COMPLIANCE PROJECT PROPOSAL
SITE MAP AND PROPOSED REPAIRS

Job Number 8410866
Revision
Date 10-15-2013

Figure 1

718 Third Street Eureka California 95501 USA **T** 1 707 443 8326 **F** 1 707 444 8330 **W** www.ghd.com

Plot Date: 15 October 2013 - 7:54 PM Cad File No: G:\01799 Loleta CSD\8410866 Loleta-WW Compliance Plan Rev\06-CAD\Figures\84108660-Figure1_Site-Map.dwg

Appendix D – Contact Information for Involved Parties

Contact List for Parties and Agencies involved in
Loleta Community Services District Civil Liability Complain No. R1-2012-0086

Loleta Community Services District
Marcus Drumm, General Manager (loletacsd@suddenlink.com)
PO Box 236
Loleta, CA 95551-0236
Phone: (707) 733-1717

GHD
Yoash Tilles, Project Manager (Yoash.Tilles@GHD.com)
Rebecca Crow, Project Director (Rebecca.Crow@GHD.com)
718 Third Street
Eureka, CA 95501
Phone: (707) 443-8326

Regional Water Quality Control Board
Lisa Bernard, Sanitary Sewer Engineer (lbernard@waterboards.ca.gov)
5550 Skyline Blvd. Suite A
Santa Rosa, CA 95043
Phone: (707) 576-2677

Appendix E – Sanitary Sewer Collection System Rehabilitation Compliance Project Work Plan

Table E: Proposed Compliance Project Work Plan for Sanitary Sewer Collection System Repairs
Lolita Community Services District

Task	Activities	Milestone	Timeline	Opinion of Probable Cost
1) Conduct Preliminary Design Evaluation and Survey site of the Eel River Drive Main Replacement project: A preliminary design will be developed that confirms the construction methods to be used to repair and rehabilitate portions of the collection system proposed for upgrade in this compliance plan.	1. Hire a licensed engineer 2. Review three projects presented in this compliance plan 3. Conduct a topographic survey by a licensed surveyor to determine existing ground, manhole elevations, existing underground utilities and Humboldt County Right of Way 4. Confirm construction methodology and pipeline alignment for West Eel River Drive Project based on topographic survey	Preliminary Design	January 2014 to February 2014	$12,000
2) Develop Bid Package including Plans and Specifications and obtain Humboldt County Encroachment Permit: Based on the preliminary design a bid package including Plans and Specifications will be prepared for use in requesting formal bids.	1. Develop design details for Eel River Drive Main, North Montgomery Drive Main and Pershing Avenue to Franklin Avenue (Boutwell Lateral) Projects 2. Develop current opinion of probable cost for completion of project 3. Develop specifications 4. Provide design to appropriate agencies such as NCRWQCB for review and comment 5. File CEQA Notice of Exemption 6. Obtain Humboldt County Encroachment Permit	Bid Package & County Encroachment Permit	February 2014 to April 2014	$25,000
3) Project Bidding: Project is advertised for bid. Results will be evaluated and contractor bond and insurance will be reviewed prior to execution of a contract.	1. Prepare and advertise bid package 7. Conduct Pre-Bid site meeting and respond to Contractor questions. 2. Select and notify preferred contractor 3. Execute contract documents	Executed Contract	June 2014	$7,500

Table E: Proposed Compliance Project Work Plan for Sanitary Sewer Collection System Repairs
Lolita Community Services District

Task	Activities	Milestone	Timeline	Opinion of Probable Cost
4) Construction and Construction Inspection and Management: Construction of the project occurs, and qualified inspectors will ensure that the project runs smoothly and that the work is constructed as intended.	1. Initiate project construction 2. Order project materials and supplies and ensure permits are in place 3. Assign a qualified construction inspector/ engineer to the project 4. Verify that all work was completed in accordance to the specifications 5. Complete construction project	Construction Complete	June 2014 to October 2014	$338,920
5) Construction Project Closeout: During the closeout phase the inspector will establish that all work is complete. Operations testing will be performed. Copies of record drawings will be filed with the District.	1. Establish work is complete – File Notice of Completion 2. Provide record drawings to the District 3. Prepare recommendations concerning final payments to Contractors	Record Drawings	November 2014	$3,000
			Total	$386,420

GHD Inc

718 Third Street

Eureka CA 95501

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Document Status

Rev No.	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date
1	Yoash Tilles	Rebecca Crow				

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